ATTORNEY DOCKET NUMBER FORM PTO-1390 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LSP-0010 TRANSMITTAL LETTER TO THE UNITED STATES U.S. APPLICATION NO (if known see 37 C F.R. 15) DESIGNATED/ELECTED OFFICE (DO/EO/US) 09/830591 CONCERNING A FILING UNDER 35 U.S.C. 371 PRIORITY DATE CLAIMED INTERNATIONAL APPLICATION NO. INTERNATIONAL FILING DATE 29 October 1998 PCT/EP99/08089 26 October 1999 TITLE OF INVENTION CONVERTER APPLIANCE CAPACITOR ASSEMBLY APPLICANT(S) FOR DO/EO/US Rodscha DRABON, Manfred ZENGERLE and Johannes SCHOLTEN Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information: This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371. This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371. This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the X 3. expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1). A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date. X5. \_\_\_\_a. . A copy of the International Application as filed (35 U.S.C. 371(c)(2)). is transmitted herewith (required only if not transmitted by the International Bureau). **₫ b**. <u>X</u> has been transmitted by the International Bureau. Al c. \_ is not required, as the application was filed in the United States Receiving Office (RO/US) A translation of the International Application into English (35 U.S.C. 371(c)(2)). 6 X Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) are transmitted herewith (required only if not transmitted by the International Bureau). have been transmitted by the International Bureau. have not been made; however, the time limit for making such amendments has NOT expired. d.  $\overline{X}$  have not been made and will not be made. A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). **8**51 -An oath or declaration of the inventor(s) 35 U.S.C. 371(c)(4). 10. A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). Items 11. to 16. below concern other document(s) or information included: An Information Disclosure Statement under 37 CFR 1.97 and 1.98. 11. 💌 12. \_\_ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 13. <u>X</u> A FIRST preliminary amendment. A SECOND or SUBSEQUENT preliminary amendment. 14. \_ A substitute specification. 15. \_ A change of power of attorney and/or address letter. 16. <u>X</u> Other items or information: - A copy of the Published PCT Application by WIPO under WO 00/27020, including the Search Report and references cited - A copy of the International Preliminary Examination Report, including amended claims 1 and 2 under Article 34. EXPRESS MAIL Mailing Label No. EL531174124US Date of Deposit: April 27, 2001 I hereby certify that this paper or fee is being deposited with the

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

MAILER John Hill

SIGNATURE

JC18 Rec'd PCT/PTO 2 7 APR 2001

U.S. APPLICATION N	O_(if known 37 C.F.P.,1.5)	5) INTERNATIONAL APPLICATION NO. PCT/EP99/08089		ATTORNEY DOCKET NUMBER LSP-0010	
17. X The following fees are submitted:  Basic National Fee (37 CFR 1.492(a)(1) - (5)):  Neither international preliminary examination fee (37 CFR 1.482)  nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO  and International Search Report not prepared by the EPO or JPO\$1,000.00				CALCULATIONS	PTO USE ONLY
International preliminary examination fee (37 CFR 1.482 not paid to USPTO but International Search Report has been prepared by the EPO or JPO\$860.00					
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO\$710.00					
International pre all claims did no	International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4)\$690.00				
International pre all claims satisfic	liminary examination fee ed provisions of PCT Art	paid to USPTO (37 CFR icle 33(1)-(4)	1.482) and\$100.00		
	ENTI	ER APPROPRIATE BA	SIC FEE AMOUNT =	\$860.00	
Surcharge of \$130.00 f the earliest claimed pri	or furnishing the oath or ority date (37 CFR 1.492	declaration later that _ 20 (e)).	_30 months from	\$	
Claims	Number Filed	Number Extra	Rate		
Total claims	7- 20 =	0	X \$18.00	\$	
Independent Claims	1-3=	0	x \$80.00	\$	
Multiple dependent cla	ims(s) (if applicable)		+ \$270.00	\$	
		TOTAL OF ABOVI	E CALCULATIONS =	\$860.00	
Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by ½.			\$		
SUBTOTAL =			\$860.00		
Processing fee of \$130.00 for furnishing the English translation later the _ 20 _ 30 months from the earliest claimed priority date (37 CFR 1.492(f)). +				\$	
TOTAL NATIONAL FEE =			AL NATIONAL FEE =	\$860.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +					
	TOTAL FEES ENCLOSED =				
·				Amount to be: refunded	\$
				charged	\$
a. X A check in the a	a. X A check in the amount of \$860.00 to cover the above fee is enclosed.				
	b Please charge my Deposit Account No. 23-3050 in the amount of \$ to cover the above fees. A duplicate copy of this sheet is enclosed.				
c. X The Commissioner if hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 23-3050. A duplicate copy of this sheet is enclosed.					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO: Steven B. Samuels SIGNATURE					
Mackiewicz & Norri One Liberty Place - 40	Woodcock Washburn Kurtz  Mackiewicz & Norris LLP One Liberty Place - 46th Floor  Steven B. Samuels NAME				
Philadelphia, PA 191 (215) 568-3100	Philadelphia, PA 19103				

JC18 Rec'd PCT/PTO 2 7 APR 2001

DOCKET NO.: LSP-0010

**PATENT** 

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Rodscha DRABON, Manfred ZENGERLE and Johannes SCHOLTEN

**International Application No.:** PCT/EP99/08089

**International Filing Date:** 26 October 1999

For: CONVERTER APPLIANCE CAPACITOR ASSEMBLY

Assistant Commissioner of Patents & Trademarks Washington, DC 20231

Sir:

### PRELIMINARY AMENDMENT

Prior to examination of the above-referenced patent application, please make the following amendments and consider the following remarks.

#### In the Specification:

At page 1, change the title to CONVERTER APPLIANCE CAPACITOR ASSEMBLY

Replace the paragraph at page 1, lines 5-8 with the following paragraph:

--The invention relates to a converter appliance capacitor assembly which has at least one capacitor and can be attached by means of side mechanical holders to a base frame of the converter appliance or to a heat sink.--

At page 1, after line 23, insert the following paragraphs:

-A modular system for forming converter appliances of different power and with different types of cooling is known from DE 196 28 549 A1. In this case, a large number of individual capacitors are combined to form capacitor groups and are attached via holding plates to the cooler of the converter appliance.

A circuit arrangement for operation of at least one battery-powered electric motor in an industrial truck is known from DE 44 12 407 A1. In this case, at least one row of capacitors is arranged on a mounting body, which is connected to the cooler of a converter appliance.

A power converter having a capacitor assembly is known from US 5,729,450. In this case, a large number of individual capacitors are attached by means of side holding plates to the frame of the converter. The electrical connections arranged on the front faces of the capacitors are connected to busbars.--

Replace the paragraphs at page 1, lines 24-36 and page 2, lines 1-18 with the following paragraphs:

--The invention is based on the object of specifying a converter appliance capacitor assembly, which allows the converter appliance to have an extremely compact design.

This object is achieved by a converter appliance capacitor assembly which is designed as a load-bearing component of the converter appliance and has at least one front or side mechanical electrical connection and measurement sensor holder for making contact with external power connections, such as an electrical power supply and load connections.

The advantages which can be achieved by the invention are, in particular, that the proposed converter appliance capacitor assembly makes it possible to design a converter appliance

such that space is saved, the weight is reduced and costs are reduced. Since the converter appliance capacitor assembly is itself designed as the load-bearing component of the converter appliance, there is no need whatsoever for the mechanical supporting and auxiliary frames which are normally generally used for converter appliances. A further advantage is that the converter appliance capacitor assembly can be disassembled for recycling.

One advantageous refinement of the invention is for at least one electronic circuit - preferably a drive circuit for power semiconductors - to be attached to the front mechanical holder. This embodiment assists the idea of the invention of allowing the capacitor assembly to be designed as compactly as possible.--

At page 2, delete lines 20-32 and replace with the following paragraph:

-- The mechanical holder can be arranged at the front or side with respect to the capacitor. Depending on the spatial requirements, it may in this case be advantageous for a number of individual holders to be provided at the side of the capacitor. This means that the converter appliance capacitor assembly according to the invention can be used for a large number of spatial requirements.--

### In the claims:

Please amend claims 1-4 as follows:

1. (Amended) A converter appliance capacitor assembly which has at least one capacitor (1) and can be attached by means of side mechanical holders (2, 3) to a base frame (4) of the converter appliance or to a heat sink (12), characterized in that the converter appliance capacitor assembly is designed as a load-bearing component of the converter appliance and has at least one

front or side mechanical electrical connection and measurement sensor holder (5) for making contact with electrical power connections, such as an external power supply and load connections.

- 2. (Amended) The converter appliance capacitor assembly as claimed in claim 1, characterized in that at least one electronic circuit (9) preferably a drive circuit for power semiconductors (11) is attached to the front mechanical holder (5).
- 3. (Amended) The capacitor assembly as claimed in claim 1, characterized in that the mechanical holder (5) is provided at the front with respect to the capacitor (1).
- 4. (Amended) The capacitor assembly as claimed in claim 1, characterized in that the mechanical holder (5) is arranged at the side on the capacitor (1), for attachment of the electrical connections.

Please add claims 6 and 7 as follows:

- 6. The capacitor assembly as claimed in claim 2, characterized in that the mechanical holder (5) is provided at the front with respect to the capacitor (1).
- 7. The capacitor assembly as claimed in claim 2, characterized in that the mechanical holder (5) is arranged at the side on the capacitor (1), for attachment of the electrical connections.

#### **REMARKS**

Early consideration and allowance of the above-referenced patent application is respectfully requested.

Claims 1-4 have been amended. Claims 6 and 7 have been added. The specification and the title have also been amended.

No new matter has been entered. None of the amendments are submitted for reasons of patentability.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Date: AMZ7, 2001

Respectfully submitted,

Registration No. 37,711

WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS One Liberty Place - 46th Floor Philadelphia, PA 19103 (215) 568-3100

# VERSION WITH MARKINGS TO SHOW CHANGES MADE

## In the Specification:

The title has been changed and paragraphs have been replaced, added or deleted as indicated in the Preliminary Amendment.

#### In the claims:

Claims 6 and 7 have been added.

Claims 1-4 have been amended as follows:

- 1. (Amended) A converter appliance capacitor assembly [for a converter appliance having a] which has at least one capacitor (1) [which] and can be attached by means of side mechanical holders (2, 3), to a base frame (4) of the converter appliance or to a heat sink (12) [and which has an additional front mechanical holder (5) for attachment of at least one electrical connection (6) of the converter appliance and of at least one measurement sensor, in particular of a current transformer (7) and/or voltage transformer (8)] characterized in that the converter appliance capacitor assembly is designed as a load-bearing component of the converter appliance and has at least one front or side mechanical electrical connection and measurement sensor holder (5) for making contact with electrical power connections, such as an external power supply and load connections.
- 2. (Amended) [A] <u>The converter appliance</u> capacitor assembly as claimed in claim 1, characterized in that at least one electronic circuit (9) preferably a drive circuit for power semiconductors (11) is attached to the front mechanical holder (5).
- 3. (Amended) The capacitor assembly as claimed in claim 1 [or 2], characterized in that the mechanical holder (5) is provided at the front with respect to the capacitor (1).

4. (Amended) The capacitor assembly as claimed in [at least one of] claim[s] 1 [or 2], characterized in that the mechanical holder (5) is arranged at the side on the capacitor (1), for attachment of the electrical connections.

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## Capacitor assembly for a converter appliance

## Description

- 5 The invention relates to a capacitor assembly for a converter appliance having a capacitor which can be attached by means of side mechanical holders to a base frame or a heat sink.
- A capacitor assembly for a converter appliance has been 10 proposed in German patent application P 198 13 365.0, in which a central, metallic multifunction housing part, which is connected directly to the heat sink of the power semiconductors. is connected the capaciturs such that it makes thermal contact. driver sircuits for the power semiconductors and the control and regulating arrangement of the converter appliance are located above the capacitors. components are connected to the multifunction housing part via attachment devices required for this purpose. 20 The multifunction housing part can be designed with or without a power busbar system,
- The invention is based on the object of specifying a 25 capacitur assembly for a converter appliance, which allows the converter appliance to have an extremely compact design.
- This object is achieved by a capacitor assembly for a convertor appliance having a capacitor which can be attached by means of side mechanical holders to a base frame or a heat sink and which has an additional front mechanical holder for attachment of at least one electrical connection of the converter appliance and of at least one measurement sensor, in particular of a current transformer and/or voltage transformer.

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The advantages which can be achieved by the invention are, in particular, that the proposed capacitor assembly makes it possible to design a converter appliance such that space is saved, the weight is reduced and costs are reduced. Since the capacitor assembly is itself designed as the load-bearing and central component of the converter appliance, there is no need whatsoever for the mechanical supporting and auxiliary frames which are normally generally used for converter appliances. A further advantage is that the capacitor assembly can be disassembled for recycling.

One advantageous refinement of the invention comprises at leas; one electronic circuit - preferably a drive circuit for power semiconductors - being attached to the mechanical holder. This embodiment assists the idea of the invention of allowing the capacitor assembly to be designed simply and as compactly as possible.

20 A further feature of the invention has the same aim, and comprises the mechanical holder being provided at the frost with respect to the capacitor.

One modification of this embodiment according to the invention is for the mechanical holder to be arranged at the side on the capacitor.

Depending on the spatial requirements, it may in this case be advantageous for a number of individual holders to be provided at the side on the capacitor. This means that the capacitor assembly according to the invention can be read for a large number of spatial requirements.

The invention will be explained in more detail in the following text with reference to the exemplary embodiments which are illustrated in the drawing, in which:

WO 00/27020

PCT/EP99/08089

Figure 1 shows a perspective view of a capacitor assembly according to the invention;

- Figure 2 shows a view of the front face of a converter appliance fitted with the capacitor assembly 5 according to the invention;
  - Figure 3 shows a view of a side surface of a converter . appliance fitted with the capacitor assembly according to the invention, and
    - Figure 4 shows a perspective view of further embodiment of the capacitor assembly according to the invention.

Figure 1 shows a perspective view of a capacitor assembly. A cubic or cuboid capacitor 1 can be seem, which in connected to side mechanical holders 2, 3 on two opposite side surfaces. The capacitor may integral, but it is also possible to combine a number of individual capacitors of smaller capacitance to form the capacitor with the desired capacitance. The two side mechanical holders 2, 3 are used for mounting the dapacitor assembly on the base frame 4, for example on a heat sink (see item 12 in Figures 2 and 3). The capacitor 1 has a further, front mechanical holder 5. which extends on a face - from now on referred to as the front face - located between the mechanical holders 2, 3,

The front mechanical holder 5 of the capacitor assembly is used for attachment of electrical connections 6 (AC voltage connections, DC voltage connections) of the convertor appliance and for attachment of measurement sensors in particular of three current transformers 7 and one voltage transformer 8. Furthermore, a number of electronic circuits 9 are attached to the front mechanical holder 5. These electronic circuits 9 are

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drive circuits for the power semiconductors of the converter appliance.

A further, flat electronic circuit 10 is attached to the top face of the capacitor assembly or of the capacitor 1, this being the control and regulating device for driving the power semiconductors.

Figure 2 shows a view of the front face of a converter appliance fitted with the capacitor assembly. This shows that the capacitor 1 is mounted via the two side mechanical holders 2, 3 on a heat sink 12 to which a large number of power semiconductors 11, which are arranged side by side, are fitted. In the exemplary embodiment, this is a heat sink 12 which is fitted with cooling plates 13 and is suitable for air cooling. Liquid heat sinks can, of course, also be used.

The electrical connections 6 and current transformers 7 mounted on the front mechanical holder 5 are freely 20 accessible on their top face in order to make contact with external power connections (electrical supply, load connections), normally cable connections, on their bottom face, make contact 25 connect: ons of a busbar system 14 within the appliance. busbar system 14 provides the electrical connect: ons for the individual power semiconductors 11 and, via a capacitor connection 15 (see Figure 3) at the rear, the electrical connections for the capacitor 30 l.

Figure I shows a view of a side surface of a converter appliance fitted with the capacitor assembly. This shows the heat sink 12 with cooling plates 13, the power semiconductors 11 mounted in two rows on the heat sink 12, the capacitor 11 connected to the heat sink 12 via the side mechanical holders 2, 3, the front mechanical holder 5 with a current transformer 7

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attached to it, the busbar system 14 and the rear capacitor connection 15. The side mechanical holder 3 has been removed in order to make it possible to see into the converter appliance.

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Figure 4 shows an embodiment of the capacitor assembly according to the invention, modified from that in Figures 1 to 3. In this case, two individual holders 5' are provided instead of the integral front holder 5 as shown in Figures 1 to 3. These are also used for accommodating the electrical connections measurement sensors, such as current transformers 7, and a voltage transformer. Furthermore, there are electronic circuits 9 in the region of these individual 15 holders 5'.

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#### WO 00/27020

#### PCT/EP99/02089

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# List of : eference symbols

- 1 Capacitor
- 2 Sid; mechanical holder
- 5 3 Sid: mechanical holder
  - 4 Bas: frame
  - 5 Front mechanical holder
  - 6 Ele;trical connection
  - 7 Current transformer
- 10 8 Voltage transformer
  - 9 Eleptronic circuit (drive circuit for power semiconductors)
  - 10 Elestronic circuit (control and regulating device)
  - 11 Power semiconductor
- 15 12 Heat sink
  - 13 Cocling plates
  - 14 Busbar system
  - 15 Capacitor connection

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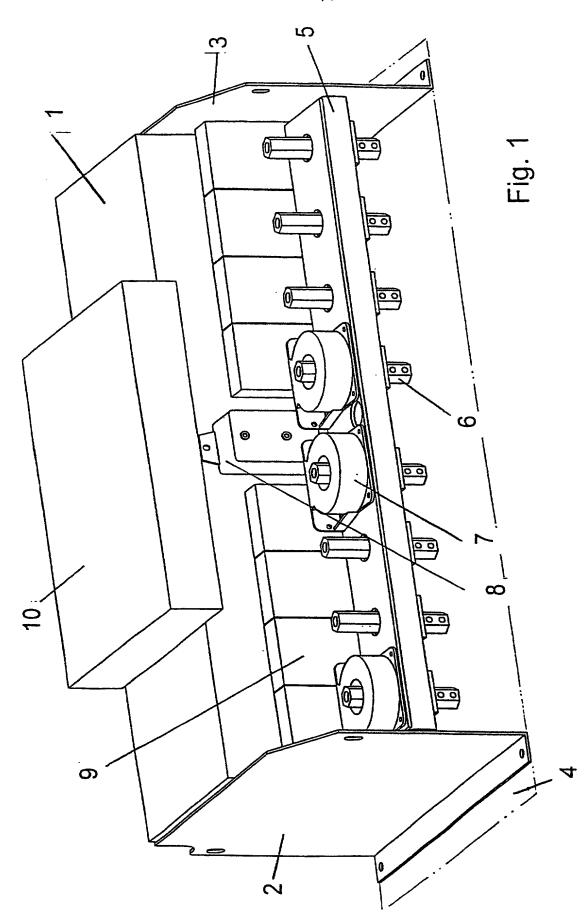
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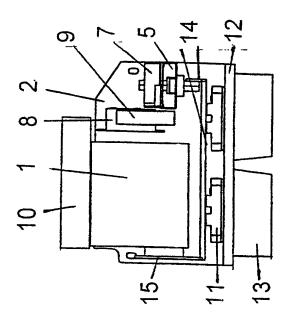
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### Patent Claims

- 1. A mapacitor assembly for a converter appliance having a capacitor (1) which can be attached by means of side mechanical holders (2, 3) to a base frame (4) or a heat sink (12) and which has an additional front mechanical holder (5) for attachment of at least one electrical connection (6) of the converter appliance and of at least one measurement sensor, in particular of a current transformer (7) and/or voltage transformer (8).
- 2. A capacitor assembly as claimed in claim 1, characterized in that at least one electronic circuit (9) preferably a drive circuit for power semiconductors (11) is attached to the front mechanical holder (5).
- 3. The capacitor assembly as claimed in claim 1 or 2, characterized in that the mechanical holder (5) is provided at the front with respect to the capacitor (1).
- 4. The capacitor assembly as claimed in at least one of claims 1 or 2, characterized in that the mechanical holder (5) is arranged at the side on the capacitor (1), for attachment of the electrical connections.
- 30 5. The capacitor assembly as claimed in claim 4, characterized in that a number of individual holders (5) are provided at the side on the capacitor (1).



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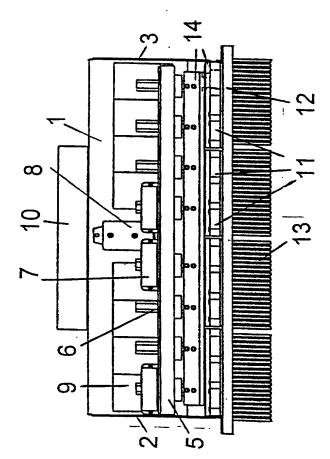
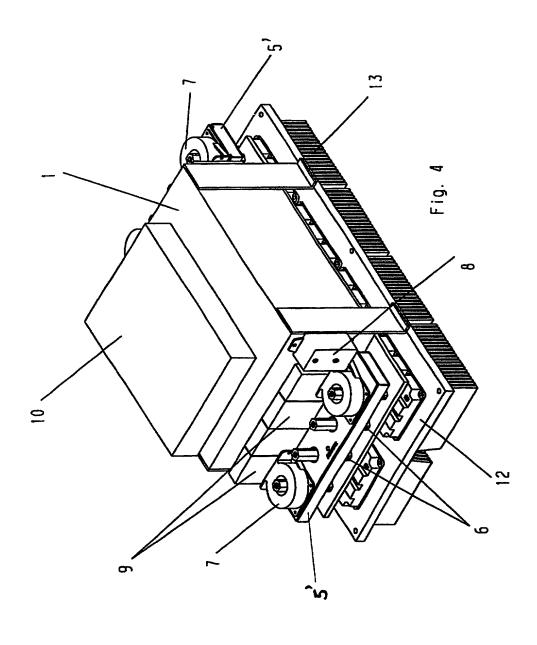


Fig. 2



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#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Rodscha DRABON, Manfred ZENGERLE and

Group Art Unit: not yet known

Johannes SCHOLTEN

Examiner: not yet assigned

Intl. Appln. No.: PCT/EP99/08089

Intl. Filing Date: 26 October 1999

For: CONVERTER APPLIANCE CAPACITOR ASSEMBLY

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#### **DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; and

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a

	Utility Patent	Ш	Design Patent
is sought on the inve	ention, whose title ap	opears abo	ve, the specification of which:
	is attached hereto.		
$\boxtimes$	was filed on 26	October 19	as International Application No.
П	PCT/EP99/08089		amended on

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to be material to the patentability of this application in accordance with 37 CFR §

1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a-d) of any **foreign application(s)** for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of any application on which priority is claimed:

Claimed (If X'd)	Country	Serial Number	Date Filed
⊠	Germany	198 49 858.6	29 October 1998
□ _			
below and disclosed in of 35 U.S. Office all which bec	, insofar as the subject in the prior United State C. § 112, I acknowledg information known to b	matter of each of the class application in the mage the duty to disclose to material to patentabil the filing date of the presentation.	United States application(s) listed aims of this application is not nner provided by the first paragraph of the U.S. Patent and Trademark ity as defined in 37 CFR § 1.56 ior application and the national or
	Serial Number	Date Filed	Patented/Pending/Abandoned

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

**Serial Number** 

**Date Filed** 

Group Art Unit: Not yet known

Examiner: Not yet assigned

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

### In Re Application of:

Rodscha DRABON, Manfred ZENGERLE and Johannes SCHOLTEN

**International Application No.:** PCT/EP99/08089

International Filing Date: 26 October 1999

For: CONVERTER APPLIANCE CAPACITOR ASSEMBLY

Assistant Commissioner for Patents Washington DC 20231

Sir:

### ASSOCIATE POWER OF ATTORNEY

The undersigned, of the firm WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania 19103, Attorney and/or Agents for Applicant(s), hereby appoints the following:

Richard E. Kurtz	Registration No. 19,263
Dale M. Heist	Registration No. 28,425
John W. Caldwell	Registration No. 28,937
Gary H. Levin	Registration No. 28,734
Steven J. Rocci	Registration No. 30,489
Dianne B. Elderkin	Registration No. 28,598
John P. Donohue, Jr.	Registration No. 29,916
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Suzanne E. Miller	Registration No. 32,279
Lynn B. Morreale	Registration No. 32,842
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Michael D. Stein	Registration No. 34,734
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Michael P. Straher	Registration No. 38,325
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David A. Cherry	Registration No. 35,099
Robert B. Washburn	Registration No. 16,574
Norman L. Norris	Registration No. 24,196
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Anthony J. Rossi Terence P. Strobaugh Michael J. Swope Michael J. Bonella Harold H. Fullmer John E. McGlynn Jonathan M. Waldman Paul K. Legaard Chad Ziegler Gwilym J.O. Attwell David N. Farsiou Maureen S. Gibbons Steven H. Meyer Paul B. Milcetic Joseph R. Condo Michael K. Jones Frank T. Carroll Mark J. Rosen Mitchell R. Brustein Eric H. Vance Peter M. Ullman Thomas E. Watson

Lynn A. Malinoski

Registration No. 38,788 Registration No. 24,053 Registration No. 25,460 Registration No. 38,041 Registration No. 41,628 Registration No. 42,560 Registration No. 42,863 Registration No. 40,861 Registration No. 38,534 Registration No. 44,273 Registration No. 45,449 Registration No. 44,104 Registration No. 44,121 Registration No. 37,189 Registration No. 46,261 Registration No. 42,431 Registration No. 41,100 Registration No. 42,392 Registration No. 39,822 Registration No. 38,394 Registration No. 47,151 Registration No. 43,963 Registration No. 43,243



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David L. Marcus	Registration No. 46,897
Christine A. Goddard	Registration No. 46,731
Ellen M. Klann	Registration No. 44,836
Andrew J. Hagerty	Registration No. 44,141
0,	

his/her associates with full power to prosecute the above-identified application and to transact all business in the Patent Office connected therewith and requests that correspondence continue to be directed to the firm of WOODCOCK WASHBURN KURTZ MACKIEWICZ

& NORRIS LLP at the above address.

Date: 100/

Steven B. Samuels
Registration No. 37,711

Woodcock Washburn Kurtz Mackiewicz & Norris LLP One Liberty Place - 46th Floor Philadelphia PA 19103

Telephone: (215) 568-3100 Facsimile: (215) 568-3439

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I hereby appoint the following persons of the firm of WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania 19103 as attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

\_\_\_\_\_ Reg. No. <u>30,489</u> Steven J. Rocci\_

Steven B. Samuels Reg. No. 37,711

Address all telephone calls and correspondence to:

Steven B. Samuels

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**MACKIEWICZ & NORRIS LLP** 

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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